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**Subject:** Inclusion of Early Action Areas in Draft FS  
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Chip:

In EPA's letter to LWG dated February 25, 2011, the Agency reminded LWG that it expected all areas under early actions to be included in the Draft FS. The LWG will not only discuss the status of each Early Action in the Draft FS, but will also carry the areas associated with each Early Action through the detailed evaluation of alternatives. It is our intent to discuss these sites accordingly:

As discussed in EPA's 2005 *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites*, early actions can help expedite and inform site-wide sediment cleanup as part of a phased FS approach. Three early actions were initiated within Portland Harbor prior to development of the draft FS. These early action sites are each under separate EPA orders with individual LWG members and include actions at:

- 1) Terminal 4 (conducted by the Port of Portland)
- 2) Gasco/Siltronic (conducted by NW Natural and Siltronic)
- 3) Arkema

These early actions are currently in various stages of completion, as described below. In addition, as part of FS scoping, EPA clarified in a February 25, 2011 letter regarding "*Schedule for Remedial Investigation (RI) and Feasibility Study (FS)*" that:

*"As a reminder, it is LWG's responsibility to include all areas under early action evaluation in the draft Feasibility Study, including Terminal 4, Gasco/Siltronic, and Arkema. We expect that each LWG member working under an AOC is providing all information to the LWG for incorporation into the draft FS. The Harbor-wide FS must weigh alternatives wherever COCs are above acceptable risk levels. Specific information should also be solicited from each project...The early action work should help the LWG produce more robust alternatives analysis for these areas, and better cost estimates."*

Consequently, this draft FS includes each of these three early action areas, which are located within AOPCs 6, 9U, and 14, in the development and detailed evaluation of alternatives. The FS evaluation was conducted using the most recent information available for each of these areas and was performed using methods that were consistent with the site-wide FS evaluation. The situations for each of the individual early action sites vary somewhat as described below. To the extent that detailed early action designs were available for these areas at the time the draft FS was being prepared, such design features were carried forward into the FS evaluation. However, the Gasco and Terminal 4 early actions specifically contemplate alternatives so that: 1) the scope of such actions are consistent with the draft FS evaluations; and 2) the early action designs selected by EPA can be described as a component of the remedy in the Harbor-wide ROD, allowing construction of the approved early action designs

to proceed after the ROD is executed. Each of the early actions is described in more detail below in the context of this process.

The Port of Portland has been implementing a removal action at Terminal 4 pursuant to an Administrative Order on Consent (AOC). The Terminal 4 Removal Action (T4 RA) selected by EPA includes a combination of monitored natural recovery, capping, and dredging, with placement of contaminated sediment in a confined disposal facility (CDF) to be built in this area. EPA consulted with its federal, state, and tribal partners in making its non-time critical removal action decision under its CERCLA authorities. Implementation of the removal action is occurring in two phases, since the CDF is linked to the overall Harbor-wide FS and ROD. A majority of the T4 CDF capacity is anticipated to be reserved for non-T4 sediments. Thus, many of the CDF design items are dependent upon Harbor-wide decisions that will be made by EPA in the ROD.

A Phase I Abatement Measure was completed in 2008. The post-construction sediment data collected in this area were included in the FS database, and this area was evaluated in the draft FS using methods similar to all other site-wide areas to determine if any additional remediation may be necessary in this area under the ROD. In January 2010, EPA made the decision to implement Phase II after the Harbor-wide ROD, including the final CDF design, construction, and remaining actions at T4. A primary reason the EPA realigned the Phase II schedule was to provide better integration of the CDF design with the Harbor-wide FS to allow the EPA to better evaluate the protectiveness and cost-effectiveness of the CDF alternative and select or change this alternative in the Harbor-wide ROD. The T4 CDF 60 Percent Design document has been completed, and this information was used in the Harbor-wide FS. The T4 CDF is included as a specific disposal site option in a number of FS alternatives to allow EPA to evaluate and select the final remedial action at T4 consistent with the Harbor-wide ROD. Alternatives not involving a CDF in this area are also evaluated in the draft FS for comparative purposes.

NW Natural and Siltronic are preparing remedial design documents for sediments adjacent to the Gasco and Siltronic facilities under an EPA AOC. The remedial design for the Gasco and Siltronic facilities is being developed to be consistent with the Harbor-wide FS, and will ultimately be directly incorporated into the Harbor-wide remedy decision to be identified in the ROD. To achieve the desired consistency and integration of these actions, the analysis of remedial alternatives in the FS includes a detailed evaluation of sediments near the Gasco and Siltronic facilities. The remedial action to be selected in EPA's ROD for the Gasco and Siltronic sediments will subsequently be implemented pursuant to a consent decree following completion of any necessary upland source control work being managed by DEQ.

Under an AOC with EPA, Arkema is performing site characterization and initial design evaluations for an Engineering Evaluation/Cost Assessment (EE/CA), which will evaluate alternative non-time critical removal action (NTCRA) responses to address DDx detected in sediments adjacent to the Arkema facility. The EE/CA is being performed pursuant to EPA's removal authorities, and the selected removal action will be identified by EPA in a forthcoming Action Memorandum. The removal action is anticipated to be sufficiently comprehensive such that no further sediment remediation will likely be required by the ROD within the Removal Action Area (RAA) boundary. In this FS, the area inside the prospective RAA boundary was

evaluated using methods consistent with the site-wide evaluation approach. However, specific features of the evolving Arkema EECA design that were available at the time of drafting this FS were carried forward in this FS as appropriate. The design and construction of the NTCRA will likely be separated from the Portland Harbor post-ROD implementation process.

For the areas outside the prospective RAA boundary, the draft FS evaluates these areas using methods consistent with those for other areas of the Portland Harbor Site. Similar to the rest of the Portland Harbor site, these sediments will ultimately be remediated according to ROD requirements, as necessary. The final remedial action identified for this SMA in the ROD will be constructed pursuant to a consent decree following issuance of the ROD and the completion of appropriate Pre-remedial Engineering Design Studies and following the demonstration of adequate upland source control for groundwater, soil and storm water discharges. Source control efforts associated with the specific, yet to be determined, SMA are being managed by DEQ.

We feel this level of detail that describes the framework under which these Early Actions are being conducted and the status of the work (e.g., 60% design for Terminal 4 CDF), along with our agreement to carry each Early Action area through the detailed evaluation of alternatives in the Draft FS, meets EPA's expectations.

At this point in time the LWG is not seeking formal Agency review/comment/approval of the above language, since it must be taken into context with the actual evaluation of alternatives in the Draft FS. Rather, we are seeking your feedback as to whether the approach and level of detail meet the Agency's expectation for the Draft FS. I am around most of next week if you wish to discuss this further.

Thanks,

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